

REMARKS

Entry of the foregoing, re-examination and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. § 1.112, and in light of the remarks which follow, are respectfully requested.

Claim 23 has been amended to specify that the modified polyisocyanates of the invention have a crosslinking functional group to provide antecedent basis for this language in certain dependent claims. Claim 23 has also been amended to clarify that the polyisocyanate residue has at least two isocyanate functions. Support for this amendment may be found, for example, on page 8, lines 3-5 of the specification (polyisocyanates as a separate group from monoisocyanates and diisocyanates) and in several of the working Examples (e.g., Example 7 on page 28-30).

Claims 30-34, 38, 41, 44, 45 and 49-55 have been amended in response to issues raised in the Office Action. Claim 36 has been canceled without prejudice or disclaimer. Claims 23-35 and 37-59 are currently pending in this application.

Claims 31-34, 38, 48 and 49 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement for the reasons given in paragraph (2) of the Office Action. Reconsideration of this rejection is requested for at least the following reasons.

The Examiner has requested that Applicants indicate where claims 31-34 find support in the specification. Claim 31 recites specific vicinal hydroxy compounds which may be reacted with activated carbonylating agents to form cyclic carbonates. Glycerol as a vicinal hydroxy compound is disclosed in Example 2 on pages 24-25; trimethylolpropane is disclosed in Example 16; 9,10-dihydroxystearic acid is disclosed in Example 17; and 1,9,10-trihydroxyoctadecane is disclosed in Example 19.

Further, support for claim 32 may be found on page 15, lines 22-25 of the specification. Support for claim 33 may be found in Example 2 (glyceryl carbonate), Example 6 (succinic acid glyceryl carbonate monoester), Example 11 (glutaric acid glyceryl carbonate monoester), Example 16 (trimethylolpropane carbonate), Example 17 (9, 10-dihydroxystearic acid carbonate), and Example 20 (1, 9, 10-trihydroxyoctadecane carbonate). Support for claim 34 may be found in the specification on page 7, line 31 to page 8, line 1.

Claim 38 has been amended to clarify that it is the nitrogen-containing heterocyclics and phenols which may be optionally substituted.

Claims 48 and 49 are supported throughout the specification and the working Examples. Thus, page 14, lines 1-5 refers to the reaction of compounds of formula (II) with "an isocyanate." The scheme on page 15 shows the reaction of a compound of formula (II) with $O=C=N$ -ISO where "ISO" is a polyisocyanate residue remaining after reaction of an isocyanate function (page 4). Suitable polyisocyanate reactants are listed on pages 8-9 of the specification. Processes using compounds having non-isocyanate functional groups are set forth in, for example, Examples 7-15 of the specification.

For at least the above reasons, the §112, first paragraph, rejection of claims 31-34, 38, 48 and 49 should be reconsidered and withdrawn.

Claims 36, 48 and 49 were rejected under 35 U.S.C. §112, first paragraph, for the reasons provided in paragraph (3) of the Office Action. Reconsideration of this rejection is respectfully requested for at least the following reasons.

Claim 36 has been canceled without disclaimer or prejudice. With respect to claims 48 and 49, processes using non-isocyanate functional compounds are disclosed in Example 7-15 of the specification. Accordingly, claims 48 and 49 are believed to be adequately enabled pursuant to 35 U.S.C. §112, first paragraph.

In view of the above, the §112 rejection of claims 36, 48 and 49 should be withdrawn. Such action is earnestly requested.

Claims 23-59 were rejected under 35 U.S.C. §112, second paragraph, for the reasons set forth in paragraph (4) of the Office Action. Reconsideration of this rejection is respectfully requested in view of the above amendments and for at least the reasons which follow.

The legal standard for determining compliance with the second paragraph of 35 U.S.C. §112, is whether the claims reasonable apprise those of ordinary skill in the art of their scope. See In re Warmerdam, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). In determining whether this standard is met, the definiteness of the language employed in the claims should be analyzed, not in a vacuum, but in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art. In re Johnson, 558 F.2d 1008, 1015, 194 USPQ 187, 193 (CCPA 1977).

With respect to item 1 in paragraph (4), claim 23 has been amended to provide antecedent basis for the terminology "crosslinking functional group" in claims 30, 33, 45, 50 and 52. Those of ordinary skill in this art, having read the present disclosure, would readily comprehend the scope of the phrase "crosslinking functional group." Claims 30 and 33 have been amended to clarify that the crosslinking functional group is a cyclic carbonate.

With respect to item 2 in paragraph (4), claim 55 has been amended to clarify that the polymers and/or reticulates are obtained by reaction of the polyisocyanates of claim 23. The language "hydrocarbon-based chain" in claims 23 and 24 is defined on page 5 of the specification. Accordingly, those of ordinary skill in this art would be fully apprised of the scope of this terminology.

With respect to item 3 in paragraph (4), the meaning of the language "optionally after decarboxylation" is apparent upon review of the discussion of substituent "X" on page 4 of the specification. Thus, the scope of this language in the claims would be clear to those of ordinary skill.

With respect to item 4 in paragraph (4), Applicants note that the terminology in claim 30 was "vicinal diol," i.e., compounds containing adjacent OH groups. Thus, glycerol and 1, 9, 10-trihydroxyoctadecane are vicinal diols. However, claims 30 and 31 have now been amended to refer to vicinal hydroxy compound.

With respect to item 4 in paragraph (4), the objections to claims 32-34 have been obviated by the present amendments. Thus, the parenthesis has been completed in claim 32, the dependency of claim 33 has been corrected, and antecedent basis has been provided for "crosslinking functional group" in claim 34.

In response to item 6 in paragraph (4), the word "respectively" has been removed from claim 41.

With respect to item 7 in paragraph (4), Applicants believe the scope of claims 43 and 44 would be clear to those of ordinary skill. However, claim 43 has been amended for purpose of clarification.

In response to items 8, 9, 10 and 11 in paragraph (4), claims 49, 50 and 51-54 have been amended to obviate the objections raised in the Office Action concerning these claims.

In view of the above amendments and remarks, it is respectfully submitted that the §112, second paragraph, rejection should be withdrawn. Such action is earnestly requested.

Claims 23-28, 30, 31, 33-37, 42-46, 48 and 50-59 were rejected under 35 U.S.C. §102(a) as anticipated by WO 00/55263 for the reasons set forth in paragraph (6) of the Office Action. Also, claims 39, 47 and 49 were rejected under 35 U.S.C. §103(a) as

unpatentable over WO '263 for reasons set forth in paragraph (7) of the Office Action.

Withdrawal of these rejections is respectfully requested for at least the following reasons.

WO '263 was published September 21, 2000. The present application is a continuation-in-part of International Application No. PCT/FR99/02350, filed October 1, 1999. All rejected claims are fully supported by the disclosure of said International Application. Thus, the present application has an effective U.S. filing date prior to the publication date of the WO '263 document. In view thereof, the §102(a) and §103(a) rejections based on WO '263 should be withdrawn.

Claims 23-27, 35, 48, 51, 52, 55, 56 and 59 were rejected under 35 U.S.C. §102(b) as anticipated by XP-002123895 for the reasons given in paragraph (8) of the Office Action. Reconsideration of this rejection is requested for at least the following reasons.

Initially, Applicants note that document XP-002123895 corresponds to Japanese Patent Publication No. 5-98168. A translation of Patent Publication 5-98168 was submitted with the Information Disclosure Statement filed December 18, 2003. The JP '168 document only discloses the reaction of diisocyanates with cyclic carbonates. No polyisocyanates having at least three isocyanate functions are disclosed or contemplated in the JP '168 publication. Accordingly, the §102(b) rejection based on this document should be withdrawn.

Claims 23-27, 30, 31, 33-36, 48, 51, 52, 55, 56 and 59 were rejected under 35 U.S.C. §102(b) as anticipated by EP 337 926 for the reasons given in paragraph (10) of the Office Action. Reconsideration and withdrawal of this rejection are respectfully requested for at least the reasons which follows.

The reaction scheme on page 15 of EP '926 employs hexamethylene diisocyanate to form a polyurethane containing a cyclic carbonate group. This document does not disclose or

suggest the preparation of modified polyisocyanates as claimed herein, i.e., where one of the reactants contains at least three isocyanate functions. Accordingly, the §102(b) rejection based on EP '926 should be withdrawn and such action is earnestly requested.

Claims 23-27, 30, 31, 33-35, 42, 45, 47, 48, 50, 55, 56 and 59 were rejected under 35 U.S.C. §102(b) as anticipated by EP 419114 for reasons provided in paragraph (10) of the Office Action. Reconsideration and withdrawal of this rejection are respectfully requested for at least the following reasons.

EP '114 discloses the preparation of foamed products wherein cyclic carbonates are reacted with diisocyanates to release CO₂, which acts as a foaming agent. Compounds containing cross-linkable carbonate groups as claimed herein are not formed under the reaction conditions employed in EP '114. Moreover, this document does not disclose or contemplate the use of compounds having at least three isocyanate functions as claimed herein. For at least these reasons, the §102(b) rejection based on EP '114 should be withdrawn and such action is respectfully requested.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order and such action is earnestly solicited.

If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at (703) 838-6683.

Respectfully submitted,

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